

# THE BOSTON MEDICAL AND SURGICAL JOURNAL.

---

VOL. XI.]

WEDNESDAY, SEPTEMBER 10, 1834.

[Nos. 4 AND 5.]

---

## AN ACCOUNT OF JANE C. RIDER, THE SPRINGFIELD SOMNAMBULIST.

BY L. W. BELDEN, M.D.

[Communicated for the Boston Medical and Surgical Journal.]

IN preparing an account of the Springfield Somnambulist for the Journal, I have proceeded upon the principle that in the history of an affection so extraordinary as the one now to be described, a statement of the specific facts with their attending circumstances is required, to enable the reader to form a correct judgment of the case. Something, indeed, must be attempted in the way of a general description; for it would be impossible in a disease of several months duration, which was constantly presenting some new aspect, to enumerate every particular which served to modify the complex idea of the whole. Still, it has been my aim to lay before the reader such a number of facts and experiments as shall either satisfy him of the soundness of the conclusions which I have formed, or put it in his power to detect and point out their fallacy. A full account of the case must necessarily embrace most of the particulars which have already been published in another form. These, with some trifling alterations, have therefore been included in the present history; which contains not only all that is important in the former, but is designed to supply the profession with that information, and to admit of those discussions, which were necessarily excluded from a popular work on the subject.

JANE C. RIDER is a native of Vermont; and, at the time of the occurrence of the disease of which the following is a history, was in the seventeenth year of her age. Her mother, soon after giving birth to Jane, died of a disease of the brain, the precise character of which I have been unable to learn, and left no other children. William Rider, her father, a very ingenious and respectable mechanic, resides in Brattleborough. With him and the friends of her deceased mother, Jane lived till she had completed her sixteenth year; shortly after which she removed to this town, and became an inmate of the family of Mr. Festus Stebbins, where her intelligence and uniformly mild and obliging disposition soon secured the confidence and love of all with whom she was connected. She here occupied the situation of a favored domestic—was exempted from hard labor, and treated with the utmost kindness; and, in return, always manifested much regard for the people with whom she lived. Her education is good—she is fond of reading, and especially delights in poetry, her selections of which generally evince a chaste and correct taste.

Her complexion is brown, the eyes and hair dark. Though of a full habit, her appearance is prepossessing, and her plump and rosy cheeks, by the unprofessional observer at least, would be regarded as the index

of perfect health. She, however, has always been subject to frequent headaches, and other symptoms arising from an undue determination of blood to the head ; and, about three years since, was, for several months, affected with *chorea*. A small spot on the left side of the head, near the region which phrenologists assign to the organ of *marvellousness*, has, since her earliest recollection, been *tender*, or painful on pressure, and the sensibility is much increased when she suffers from headache. For several years her eyes have been so sensible to the light as to be always painfully affected when she goes abroad in a clear day without a veil ; and the pain in the eyes has been generally accompanied with a sensation of nausea at the stomach. From her infancy she has been in the habit of sleeping more soundly and a greater number of hours than is usual. She is seldom conscious of dreaming, and rarely wakes of her own accord in the morning. In her childhood she occasionally arose and walked about in her sleep, but did not manifest any of the peculiar powers which have since rendered her case so remarkable. In the winter of 1832-3 she was several times affected with a momentary interruption of consciousness, in which her notions of time and place were exceedingly confused, and she had but an imperfect knowledge of what was transpiring around her. This circumstance then made but a slight impression on her mind, and it was not until the occurrence of similar attacks during her recent convalescence that it was recollected.

The singular affection of which she has lately been the subject, made its first appearance on the night of the 24th of June, 1833. She retired that evening in her usual health, but had not been long in bed when she was heard moving rapidly about the room, opening and shutting the windows, and talking with vehemence. She took but little notice of those who came to ascertain the cause of the disturbance, refused to return to bed, and spoke as if addressing her mother-in-law, of whose treatment she bitterly complained. It was evident she imagined herself in Brattleborough, and that she conceived the persons present to be members of her father's household. Everything which she said or did betrayed the influence of this false conception—she appeared to have no recollection of ever having been in Springfield. As she persisted in refusing to see a physician, I was introduced to her as her father, whose absence she had been lamenting ; and, in that character, succeeded in obtaining a ready compliance with my directions. I found her struggling to get out of bed, in which it required two or three to hold her. She complained of severe pain in the spot already referred to on the left side of the head. The face was flushed, head hot, and the pulse much excited. Attributing the attack to the presence of undigested food in the stomach, I gave her an emetic of ipecac. and sulphate of zinc. She rejected a large quantity of green currants, after which she soon became quiet, and fell into a natural sleep from which she did not wake till morning, when she was totally unconscious of everything which had passed in the night, and could scarcely be persuaded she had not slept quietly the whole time. Though her eyes were *apparently* closed, it was evident from the manner in which she took hold of things which were presented to her that she *saw* ; yet her senses did not dispel the illusion under which she labored. That she saw, I supposed was owing to the imperfect closure of the

eyelid—of course no importance was attached to this circumstance. Understanding the next morning that she was better, I did not see her again, and thought little of the case till several months after, when the peculiar character of the disease began to be developed. She told her friends, after this paroxysm, that she was confident she had before left her bed while asleep and changed the position of things in her chamber ; for she had several times in the morning found them occupying a different situation from that in which she left them the evening previous.

It was not until some time in the month of September that a second paroxysm occurred, though she was often heard in the interval walking about her chamber in the night. This circumstance then attracted no attention, but it is now supposed that she was at these times in a state of somnambulism. On the occurrence of the second paroxysm, after several attempts to control her, it was determined to suffer her to pursue her own course and watch her movements. Having dressed herself she went down stairs, and proceeded to make preparations for breakfast. She set the table, arranged the various articles with the utmost precision, went into a dark room and to a closet at the most remote corner, from which she took the coffee cups, placed them on a salver, turned it sideways to pass through the doors, avoided all intervening obstacles, and deposited the whole safely on the table. She then went into the pantry, the blinds of which were shut and the door closed after her, and there skimmed the milk, pouring the milk into one cup and the cream into another without spilling a drop. She also cut the bread, placed it regularly on the plate, and divided the slices in the middle. In fine, she went through the whole operation of preparing breakfast with as much ease and accuracy as she could in open day ; and this with her eyes closed and without any light except that of a single lamp which was standing in the breakfast room to enable the family to witness her operations. During the whole time, she seemed to take no notice of those around her, unless they purposely stood in her way, or placed chairs or other obstacles before her, when she avoided them with an expression of impatience at being thus disturbed. She finally returned voluntarily to bed, and on finding the table arranged for breakfast when she made her appearance in the morning, inquired why she had been suffered to sleep while another had performed her duty. None of the transactions of the preceding night had left the slightest impression on her mind—a sense of fatigue the following day being the only evidence furnished by her consciousness in confirmation of the testimony of those who saw her.

After this, the paroxysms became more frequent, a week seldom passing without one or more. Sometimes she did not leave her room, but was occupied in looking over the contents of her trunk, and arranging the different articles of dress. She occasionally placed things where she could not find them when awake ; but some circumstances induced the belief that the knowledge of their situation was restored to her in a subsequent paroxysm. In one instance she disposed of her needle-book where she could not afterwards discover it ; but after some time had elapsed, she was found one night in her chamber, sewing a ring on the curtain with a needle which she must have procured from the lost book.

The entire paroxysm was sometimes passed in bed, where she sung,

talked, and repeated passages of poetry. Once she imagined herself at Brattleborough, spoke of scenes and persons with which she was acquainted there, described the characters of certain individuals with great accuracy and shrewdness, and imitated their actions so exactly as to produce a most comical effect. At this time she denied having ever been in Springfield, nor could she be made to recollect a single individual with whom she was acquainted here, except one or two whom she had known in Brattleborough. Even the name of the people with whom she lived seemed unfamiliar and strange to her.

In a paroxysm which occurred after she had been put under a course of medical treatment, she conceived the plan of making a bag, in which, as she said, to boil some squash. She was then seen to thread a needle in a room in which there was barely light enough to enable others to perceive what she was about, and afterwards, the same night, she was seen to do it with her eyes closed. In this condition she completed the bag, and though a little puckered, as she observed, it answered very well to boil the squash in. At another time, she not only arranged the table for a meal, but actually prepared a dinner in the night with her eyes closed. She first went into the cellar in the dark, procured the vegetables, washed each kind separately, brought in the wood and made a fire. While they were being boiled, she completed the arrangements of the table, and then proceeded to try the vegetables to ascertain whether they were sufficiently cooked. After repeated trials she observed the smallest of them were done—she took them up, and after waiting a little, said the rest would do, and took them up also. They were actually very well cooked. She then remarked that S., a little girl in the family, ate milk, and procured a bowl for her—she also procured one for herself and ate it. As the people did not seat themselves at table, she became impatient, and complained that the men never were ready for their dinner. While engaged in her preparations, she observed a lamp burning in the room and extinguished it; saying “she did not know why people wished to keep a lamp burning in the day-time.” On being requested to go to bed, she objected, alleging as a reason that it was day; but was persuaded to do so by being reminded that she was not well, and that sleep would relieve her head. In the morning she appeared as usual, totally unconscious of the transactions of the preceding night.

On the 23d of October, about a month after the paroxysm in which she first set the table, I was again consulted; and from that time she continued under my professional charge till the period of her removal to the hospital. She complained much of headache, from which she suffered more or less almost every day. The pain was sometimes obtuse and general, but oftener acute and confined to a small spot on the left side of the head, near the course of the coronal suture. The scalp over this spot was tender at all times, but exquisitely so during a paroxysm of pain. There was generally a flush on the face, which deepened and extended previous to a paroxysm of somnambulism—the hands and feet were habitually cold, the pulse small but rather frequent. Her appetite was irregular, food occasioned pain and sickness at the stomach, and the bowels were inactive. The menstrual secretion had always been scanty and irregular; and, for the last three months, entirely suppressed. It



made its first appearance at the age of twelve or thirteen, and since that time had occurred only in small quantities and at long intervals, till the spring of 1833, when it appeared regularly for two or three periods, just previous to the suppression under which she was now laboring. Her health during the interval in which the menses were natural was better than usual—she then had much less headache, and experienced less oppression from food.

At first the paroxysms of somnambulism occurred only at night, and generally soon after she went to bed, before the period of sound repose. Sometimes she fell asleep in the evening while sitting in her chair—or rather she passed directly from a state of wakefulness into that of somnambulism; for the fit was never under these circumstances preceded by natural sleep. It was not until near the middle of November that the paroxysms began to affect her in the day time—subsequently the attack took place at any hour during the day or evening, but very rarely after she had gone to bed. When, during a paroxysm, she could be persuaded to lie down, she usually remained quiet till the fit subsided. If, however, she was disturbed too soon, or if she had previously been much excited by company, the hallucination was found to retain possession of the mind when she awoke. The frequency of these attacks gradually increased, so that instead of one or two in a week, there was scarcely a day during the latter part of November, when the disease appeared to reach the highest degree of intensity, in which there was not one or more.

The following description of the paroxysms applies particularly to that period of the disease when the patient was under my care; after she was removed to the hospital, and had lost the extraordinary acuteness of vision, most of the other peculiar symptoms were less marked, and some of them disappeared entirely.

The state of somnambulism was usually preceded by a full, heavy, unpleasant feeling in the head, sometimes by headache, ringing in the ears, cold extremities, and an irresistible propensity to drowsiness, attended with a feeling as if weights were appended to the eyelids. There was almost always a slight contraction of the eye-brows; the cheeks were flushed, and sometimes tinged with a crimson hue. By great exertions the fit might be put off for hours after the appearance of these symptoms; but in order to gain this reprieve, it was necessary for her to walk or to engage in some active employment. The most effectual preventive was exposure to the open air. The moment these precautions were relaxed, and sometimes in the midst of her active duties, she experienced what she described as a sense of rushing to the head, attended with the loss of the power of speech and motion. If, in this state, she was immediately carried into the open air, the fit was often arrested; but if the exposure was delayed a moment too long, she lost all recollection, and could not by any efforts be aroused. When undisturbed, she appeared like a person going quietly to sleep. Her eyes were closed, the respirations became long and deep, her attitude and the motions of her head resembled those of a person in a profound slumber. If spoken to, she would now return a quick, short, peevish answer, expressive of her unwillingness to be troubled, and perhaps get up and walk away. If left entirely to herself,

she sometimes, after remaining a few minutes in a sleeping posture, arose and engaged in some employment, whatever chanced to occur to her at the time. Generally, however, she sat in a chair with her eyes closed, at times nodding and then moving her head from side to side with a kind of nervous uneasiness, the hand being at the same time affected with a sort of involuntary motion. In this situation she read, talked, wrote or sung, in compliance with the request of those around her, or as she was prompted by the whim of the moment. Still, in the intervals of reading and talking, and even when engaged in these very acts, her nods, the expression of her countenance, and her apparent insensibility to surrounding objects, forced upon the mind the conviction that she was asleep.

During the paroxysm, the breathing, though sometimes natural, was often hurried, and attended with a peculiar moaning sound indicative of suffering. At times the pulse was accelerated, but generally it did not vary much from the natural standard. I have remarked that in her first paroxysm the head was hot; but such was not commonly the case, nor was there any unusual throbbing of the temporal arteries—the hands and feet, however, were invariably cold, and she very often complained of a general sensation of coldness. Pain in a circumscribed spot on the left side of the head was, I believe, always an attendant on the paroxysms, and frequently occasioned a degree of suffering almost beyond endurance. To this spot she invariably pointed when she exclaimed, as she often did, “it ought to be cut open, it ought to be cut open.” Occasionally the whole system was thrown into agitation, and she presented the appearance of a person in a violent fit of hysterics. There was the same heaving of the chest, and choking sensation at the throat, and the same alternation of crying and laughing, which are so characteristic of that complaint—the urinary secretion, however, was in small quantity and highly colored.

Her eyes were commonly closed; but at times, in the night, they were stretched widely open, and the pupil was then very considerably dilated. These different states of the eye seemed to occasion no difference in the power of seeing—she saw apparently as well when the eyes were closed as she did when they were open. In the daytime, during the paroxysms, they were always covered with a bandage, which she would not suffer to be removed for a single moment, unless the room was unusually dark. In order to test the sensibility of the eye, I took, one evening, a small concave mirror, and held it so that the rays proceeding from a lamp were reflected on the closed eye-lid. When the light was so diffused that the outline of the illuminated space could scarcely be distinguished, it caused, the moment it fell on the eyelid, a shock equal to that produced by an electric battery, followed by the exclamation, “why do you wish to shoot me in the eyes!” This experiment was repeated several times, and was always attended with the same result. It was also tried when she was awake, and the effect, though less striking, was very perceptible. A much stronger light thrown on my eyelids occasioned no pain.

Her natural disposition was mild and amiable; but in the paroxysms she was commonly peevish and irritable, and used frequently to say “she was cross and meant to be cross.” There were times when she answered with readiness and apparent pleasure the questions that were

proposed to test her power of vision ; but this was, for the most part, in the early periods of the disease, or when she imagined herself to be surrounded with children. She would often too, at the commencement of a paroxysm, read, write, or do whatever was required of her ; and then, as her suffering became more intense, utterly refuse to do either, and even become quite impatient on being asked. As the disease advanced, she became more and more reluctant to submit to experiments, till finally it was with extreme difficulty she could be induced to read, though the conduct still showed that the power of vision remained unimpaired.

Much of this unwillingness to exert her peculiar powers may be attributed to the pain which she endured. Though she was seldom, perhaps never, without some uneasy sensation during the paroxysm, there were times when the pain was comparatively trifling. It was in these intervals of relief, when her temper was not soured by bodily suffering, that she was amiable and communicative ; but the very excitement occasioned by the exercise of her powers produced such distress as finally to absorb every other feeling. The increased difficulty, therefore, which was experienced in prevailing on her to read, or answer questions, was doubtless, in part, owing to the aggravation of her symptoms following the repeated displays she was impelled to make in order to gratify the curiosity of the crowds who came to see her. In addition to this, there was either some change in the disease, in consequence of which she obtained a confused notion of what was transpiring around her ; or, the events which took place during the paroxysms, having been made the subject of conversation in the lucid interval, the impressions which she then received finally influenced the mind diseased, so as to create a vague undefined suspicion that she was imposed on and made the subject of ridicule. Hence in refusing to read cards and other things of the kind, she frequently assigned as a reason for so doing, that she did not wish to be laughed at. The experiments themselves were often calculated to awaken such a suspicion, had none already existed. If she was indeed unconscious of anything peculiar in herself, but when she saw with her eyes closed actually supposed them to be open, and when she perceived objects in the dark really conceived herself surrounded by the light of day, what propriety would she be likely to discover in questions which to her senses were perfectly obvious, and which she imagined to be equally so to the senses of others ? From whatever cause it arose, the influence of this suspicion at one period of the disease was very apparent. When asked the date of a coin, for example, if she deigned to make any reply, it would be either "you can see as well as I," or, ironically, "I don't know how to read." But, if a request were made which under the circumstances appeared reasonable, especially if it related to her customary duties, she generally did whatever was required. So she would answer questions which were proposed by children, or which she conceived to be proposed by them, after having refused to notice the same inquiries from an adult.

Jane's movements were generally rather slow, and she occupied considerable time in performing her ordinary domestic duties : but, in the paroxysms, she moved with astonishing rapidity, and accomplished

whatever she attempted with a celerity of which she is utterly incapable in her natural state. But notwithstanding the impetuosity of her motions, she always noticed and avoided every obstacle in her way, and never injured either herself or any article of furniture. This extraordinary quickness seemed equally to characterize her mental operations—she comprehended at a glance whatever was presented to her, seemingly without having bestowed on it a moment's attention. A single rapid observation, so quick as almost to escape the notice of a spectator, was all that she could be induced to give to any object. If again presented to her, however long the interval, it was immediately recognized and instantly dismissed. Were I to select a single trait which more than any other distinguished these paroxysms, and which in fact unlocks the mystery of the whole, it would be the astonishing quickness, vividness and distinctness of her perceptions. This furnished her with marks by which to distinguish objects which entirely escaped the notice of ordinary observers. The cards which she *appeared* to read when the backs only were presented to her, were cards which she had seen before, and which her discriminating vision enabled her to recognize without again seeing the name. That this was so, is proved by the fact that when the back of cards which she had never seen was placed before her, she was unable to read the name through the paper.

Her remarks during the paroxysms were generally distinguished by a degree of brilliancy and wit peculiar to these occasions. She also read both poetry and prose much better than she did in the lucid interval; that is, her tones and inflexions were more just and better adapted to express the sentiments of the author. There were times when she displayed an extraordinary power of imitation, a talent which she was never known to exercise in her natural state. She adopted the manner as well as the language and sentiments of those whom she personified, and her performances in this way were so striking, and her conception of character so just, as to produce a very comical effect. This she sometimes did in the hearing of the persons whom she imitated, apparently without being aware of their presence.

Though rather fond of music, she had no knowledge of the subject, was never taught to sing or play, or known to make the attempt to do either when awake. But, in this as in many other respects, her personal identity seemed to be changed by the paroxysm. Her fondness for singing then amounted to a passion—she was never satisfied with listening, and frequently besought the indulgence of another tune after having quite exhausted the patience of the performer. There were also several songs, such as "Bruce's Address to his Army," and "Auld Lang Syne," which she then sung herself with tolerable correctness. She did not, it is true, sing like an experienced performer; but her faults were such as arose rather from a want of practice than from any defect of taste.

There is abundant evidence that she recollected during a paroxysm circumstances which occurred in a former attack, though there was no remembrance of them in the interval. Almost every day furnished examples of this singular phenomenon. The following circumstance, though by no means the most remarkable of the kind, will serve for an illustration. A lady, who came to see her during a paroxysm, placed in her

hand a bead bag which she had not before seen. Jane examined it, named the colors, and compared them with those of a bag belonging to a lady in the family. The latter bag being presented to her in a subsequent paroxysm, the recollection of the former was restored—she told the color of the beads, and made the same remarks respecting the comparative value of the two bags that she had done before. I had taken measures in the interval to satisfy myself that she then remembered nothing of the first impression. The facts hereafter to be mentioned relative to her learning the game of backgammon at the hospital, furnish perhaps the most striking example of this mental affection.

Circumstances which occurred in the lucid interval just previous were not often remembered in the paroxysm, though she frequently recollected events which had transpired within a few weeks or days. Some early impressions, of which she had at best but an imperfect recollection in her natural state, were revived, at these times, with all their original vividness. Mention has already been made of her imagining herself at Brattleborough, and I doubt not that the scenes of her childhood were then presented to her mind with all the distinctness of actual vision. But I now particularly refer to her power of recollecting passages of poetry or prose which she had formerly either read or learned, but which had since entirely escaped from her memory. The two pieces which she repeated oftener were entitled "*The Pilgrim Fathers*" and "*The Snow Storm.*" The first she used to recite at school; the other she read several years since with much interest, without thinking, however, of committing it to memory. These she frequently rehearsed during the paroxysms, both spontaneously and at the request of others, with a degree of correctness and taste not only beyond what she was capable of when awake, but which few, however well informed, could equal. From repeated trials, I am satisfied she could not, in her natural state, repeat a single stanza of either, even after she had been in the practice for weeks of reciting them in the paroxysms almost daily.

Generally her conceptions relative to place were to a certain extent correct—those relating to time were more commonly inaccurate. She almost invariably supposed it was *day*; hence her common reply, when reminded that it was time for her to retire, was, "What! go to bed in the daytime!" And when I say her notions relative to place were in accordance with fact, the statement requires very considerable limitation. When in Springfield she sometimes imagined herself in Brattleborough, and when in Worcester conceived herself in Springfield; but commonly her conceptions corresponded more nearly with the true state of things. While she remained at Mr. Stebbins's she generally supposed she was in the room which she was accustomed to occupy during the day, though in almost every instance she actually was in a different apartment. When asked the time of day, she looked towards the part of the room where she expected to find the clock, and answered as if she had really seen it—her answer, however, corresponded with her previous impressions rather than with the true time. If her attention was directed to different articles, she recognized them as belonging to the room where she really was, but wondered how they came to be in the wrong apartment. Still her movements were always regulated by her senses, and not by her precon-

ceived notions of things. She had a paroxysm the evening after she came to reside with me, in which she imagined herself at Mr. Stebbins's; but when told to retire, she left the room with her usual impetuosity, traversed a dark passage in which there were several articles of furniture, all of which she avoided, and reached her chamber before any one was prepared to follow her, though she had been in it but once before.

In the early stage of her complaint she appeared to take but little notice of persons unless they were connected with the ideal scene passing in her mind, and then she regarded those with her only as the representatives of the persons whom she imagined to be present. Nor did the sight or hearing have any tendency to correct this false impression. Thus in her first paroxysm she regarded me as her father, and continued to do so as long as I remained with her, though in her subsequent fits the idea was never revived. Until she became a member of my family she seldom or never recognized me in the paroxysms—she saw me and answered my questions, still it was evident she did not know me. Ordinarily she did not seem to be aware of the presence of strangers, of whom there were frequently from ten to twenty in the room; yet, when directed to do it, she went to the door to receive company, introduced people into the drawing-room, handed the fruit, not omitting to serve a single individual, and performed all the duties of her place with as much precision and despatch as she could have done when perfectly awake. In a single instance, too small a number of knives, and apples of an inferior quality, were purposely provided—she noticed both circumstances, went into another room and procured more knives, and afterwards observed to a member of the family that she was ashamed to offer such ill-looking apples. Sometimes, for an experiment, people called at the door to inquire for different individuals in the family—she always returned a ready answer to these inquiries, but represented the persons called for as then engaged precisely as they actually had been a few hours or days before. At one time an attempt was made to awake her by pricking her with a pin—she soon became aware of the design, and though her eyes were closed she carefully avoided the one who had the pin, shunning him at every turn so skilfully that he could not get near her. The other individuals present she regarded no more than she did the chairs or tables. She was usually insensible of my presence; but whenever she had succeeded in obtaining an apple which she knew I had forbidden her to eat, she watched every motion, and kept at the utmost distance for fear I should discover and deprive her of the apple. Her conceptions of persons generally corresponded with the idea of the place in which she conceived herself to be. She was in the habit, when well, of spending her evenings in the room with the children of the family, and it was in their company that she often imagined herself to be during the paroxysms. The questions that were at these times proposed to test her power of vision were cheerfully and readily answered, because they were questions which it was common for children to ask; or, at least, she supposed them to proceed from children. Much that she said was also directed to them, though it was evident, at times, her conceptions and perceptions were strangely intermingled. In a paroxysm soon after the arrival of her father, he asked her a question, which she answered by addressing a little boy belonging to the family who was



not then in the room ; but his knife, which he placed in her hand, she immediately recognized as her father's, and wondered how that came to be in Springfield while he was in Brattleborough. At a later period of the complaint, owing probably to circumstances already alluded to, she appeared to comprehend more of what transpired in her presence ; and accordingly she obstinately refused to read cards or submit to experiments of any kind.

Many more facts might be mentioned illustrative of her peculiar state of mind in these paroxysms ; but enough have been given to show that her perceptions were limited to a few objects, and that unless when perverted by the strength of her imagination, they were remarkable for their vividness and distinctness.

Attempts to rouse her from this state were uniformly unsuccessful. She heard, felt, and saw ; but the impressions which she received through the senses had no power to wake her. A pailful of cold water was, in one instance, thrown upon her—she exclaimed “ Why do you wish to drown me ? ” went to her chamber, changed her dress, and came down again. Snow and ice-cold water were sometimes applied to the head—she complained of the cold, but the application did not affect the duration of the paroxysm. Large doses of laudanum were sometimes given with a view to relieve her pain—it appeared not only to mitigate her sufferings, but to shorten the paroxysm, for she was observed generally to wake soon afterwards. Excitements of every kind, particularly attempts to draw forth her peculiar powers, invariably prolonged the fit, and greatly aggravated the pain in the head. On the other hand, quietude and entire seclusion were the most efficient means of checking the violence of the symptoms, and of bringing the paroxysms to a speedy termination.

At the termination of the paroxysms, which usually lasted from an hour to half a day or even more, she sunk into a profound sleep. The frown disappeared from her brow, the respirations again became long and deep, and the attitude was that of a person in undisturbed slumber. She soon began to gape and rub her eyes, and these motions were repeated after short intervals of repose. In the course of fifteen or twenty minutes from the first appearance of these symptoms, she opened her eyes, when recollection was at once restored. She then invariably reverted to the time and place at which the attack commenced, and in no instance, when under my care, manifested any kind of knowledge of the time which had elapsed or the circumstances which transpired during the interval.

In the preceding account of the paroxysms, but little has been said of the extraordinary acuteness of vision which has rendered this case so remarkable ; as I chose to reserve the facts and experiments relating to this subject for a separate consideration. In the mean time it appeared important to detail with some degree of minuteness the physical and mental phenomena which accompanied this state of vision, in order, if possible, to elicit some principles which may lead to a plausible explanation of the facts. I propose now to proceed to a specification of those facts ; and trust that the extreme novelty of the case will excuse whatever in it may appear like unnecessary repetition, or tedious minuteness.

Though no decisive experiments were made to establish the fact, the members of the family in which she lived were very early convinced that

she saw both when her eyes were closed and in the dark. They were irresistibly led to this conclusion, when they saw her, night after night, perform that which seemed impossible for any one to do without the aid of vision; and, at the same time, could discover nothing that indicated the want of sight. She never betrayed anything like hesitancy or indecision—there was no groping, no feeling after the object which she wished to lay hold of; but the motion was quick and prompt, as if she were fully aware of its precise situation. When obstacles were placed in her way, or the position of a thing was changed, she always observed it, and accommodated herself to the change. Her chamber was contiguous to a hall, at one extremity of which was a stair-case. At the head of the stairs was a door that was usually left open, but was once closed after she was asleep, and fastened by placing the blade of a knife over the latch. On getting up she rushed impetuously from her room, and without stopping, reached out her hand before she came to the door, seized the knife, and throwing it indignantly on the floor, exclaimed, "Why do you wish to fasten me in?" This kind of evidence, though it may be perfectly satisfactory to the witnesses, is not so well calculated to produce conviction in the minds of others as tests of a different kind.

No direct trial of her power of vision was made till Sabbath evening, Nov. 10th, when it was proposed to ascertain whether she could read with her eyes closed. She was seated in a corner of the room, the lights placed at a distance from her, and so screened as to leave her in almost entire darkness. In this situation she read with ease a great number of cards that were presented to her, some of which were written with a pencil, and so obscurely that in a faint light no trace could be discerned by common eyes. She told the date of coins, even when the figures were nearly obliterated. A visitor handed her a letter, with the request that she would read the motto on the seal; which she readily did, although several persons present had been unable to decipher it with the aid of a lamp. The whole of the time, the eyes were apparently quite closed.

The second day after this experiment she fell asleep in the morning, in the act of procuring water from the pump. This was her first attack in the daytime. Soon after, on going out of doors, she observed to her companion, "What a beautiful day it is—how bright the sun shines!" It was in fact quite cloudy. When asked by one of the ladies in the family to thread a needle, she refused, saying, "You can do it for yourself." She soon went into a neighboring house, where there was an elderly lady to whom she often rendered this kind of assistance. This lady said, "Jane, I am old, and cannot see very well; will you thread my needle for me?" She immediately complied with the request, and threaded the needle not only at that time but once or twice after. She awoke from the paroxysm in the afternoon, and was much distressed lest, as the fits had begun to affect her in the daytime, they would ultimately terminate in insanity.

The next morning she fell asleep while I was prescribing for her, and her case having now excited considerable interest, she was visited during that and the following day by probably more than a hundred people. To this circumstance, undoubtedly, is to be attributed the unprecedented

length of the paroxysm ; for she did not wake till Friday morning, forty-eight hours after the attack. During this time she read a great variety of cards, written and presented to her by different individuals, told the time by watches, and wrote short sentences. For greater security a second handkerchief was sometimes placed below the one which she wore constantly over her eyes, but apparently without causing any obstruction to the vision. She was evidently much exhausted by the efforts that she made, and, at times, her sufferings were extreme.

Wednesday, Nov. 20th, I took a large black silk handkerchief, folded it, and having placed between the folds two pieces of cotton batting, applied it in such a way that the cotton came directly over the eyes, and completely filled the cavity on each side of the nose—the silk was distinctly seen to be in close contact with the skin. Various names were then written on cards, both of persons with whom she was acquainted and of those who were unknown to her, which she read as soon as they were presented. This was done by most of the persons in the room. In reading she always held the paper the right side up, and brought it into the line of vision ; generally elevating it so much that if it were possible for her to see under the bandage, the object could not be discerned in that direction. The cards were generally placed in her hand for the purpose of attracting her notice ; but, when her attention was excited, she read equally well that which was held before her by another.

Being desirous if possible to prove that the eye was actually closed, I took two large wads of cotton, placed them directly on the closed eyelid, and then bound them on with the handkerchief before used. The cotton filled the cavity under the eyebrow, came down to the middle of the cheek, and was in close contact with the nose. The former experiments were then repeated, without any difference in the result. She also took a pencil, and while rocking in her chair, wrote her name, each word separately, and dotted the *i*. Her father, who was present, asked her to write his name. " Shall I write Little Billy, or Stiff Billy ? " was her reply, imagining the question was proposed by a little boy of the name of William belonging to the family. She wrote *Stiff Billy*—the two words without connection, and after writing them both, she went back and dotted the *i* in each. She then wrote *Springfied* under them, and after observing it a moment smilingly remarked that she had left out a letter, and inserted the *l* in the proper place. A watch enclosed in a case was handed to her, and she was requested to tell the time—after examining both sides, she opened the case and then answered the question. A gentleman present wrote his name in characters so small that no one else could distinguish it at the usual distance from the eye—as soon as the paper was put into her hand she pronounced the name. It was thought that any attempt to open the eye would be indicated by the contraction of the skin on the forehead ; but though she was closely watched, nothing of the kind was observed. These experiments were performed in the presence of several of the most intelligent and respectable gentlemen in town, and they were all convinced there could be no deception.

I was now extremely solicitous to try her power of vision in a dark room ; and a paroxysm soon after occurring in the evening, the fire was carefully extinguished, the shutters drawn close and the lamps removed—

not a ray of light could be distinguished by any one in the room. This happened to be one of those paroxysms in which there was an extreme degree of irritability of temper—at the very commencement she refused to read, and indignantly threw from her whatever was put into her hand. It was consequently only from her conduct, or by expressions that involuntarily escaped from her, that any inferences relative to her vision could be drawn. She had a bandage loosely drawn over her eyes, such as she always wore at these times. After the apartment was darkened, a piece of tin ware painted with bright colors was held before her at the distance of two or three feet—she instantly, before a word had been spoken, struck and knocked it to the floor. A small vase, having on it a white glazed figure, was next tried. She was asked if she would have a glass of water :—" I am not so great a fool," she replied, " as not to know a tumbler from a watch." A watch had been shown to her that evening, and she evidently mistook the white elevated surface of the vase, for a watch. A pamphlet was then held up, and she was requested to give her opinion of that bonnet—she peevishly replied, " I don't want any of your old pamphlets." In neither of these instances was a word said by which a single individual present, except the one who made the trial, could conjecture the nature of the experiment. At another time the lights were removed from the room, and the windows so secured that no object was discernible. Two books were then presented to her, which had been selected for the purpose ; she immediately told the titles of both, though one of them was a book which she had not before seen.

There are one or two other facts, which, although not strictly to be regarded as evidences of an uncommon power of vision, ought nevertheless to be stated in connection with this subject. As she was reading, in one of her paroxysms, an account of her own case in the newspaper, a pamphlet was held between her eyes and the paper, notwithstanding which she proceeded as though nothing had been interposed. The paper was one which she could not have before seen. This account immediately attracted her attention, and she commenced reading it partly aloud and partly in a whisper too low to be distinguished, intermingling, as she read, her comments upon the statements. This she continued to do after her vision was intercepted by the pamphlet ; and she was distinctly heard to repeat phrases and detached sentences, which occurred in the subsequent parts of the article. This, I suppose, she was enabled to do in consequence of the impression which she received before there was any obstruction to the vision. Her perceptions, as I have before remarked, were wonderfully rapid—the eye gathered at a glance whatever was within the field of vision, and the impression thus acquired remained after the object was withdrawn.

On another occasion she took some water and was proceeding to her chamber for the purpose of washing herself, but was prevailed on to remain below stairs, on being assured by one of the ladies that she should not be disturbed. For the purpose of ascertaining how far her powers of observation were awake, a little boy, whose presence she ordinarily would not have heeded, entered the room. She instantly noticed him, and made some remarks about her being thus disturbed by intruders. To females she paid no attention—they passed in or out, and she did

not seem even to be aware of their presence. But the moment a male came to the door, though her back was turned towards it, she repeated his name without moving her head, and muttered something about the indelicacy of being seen in that situation. Of this fact, as here stated, I have no doubt, though I did not myself witness it ; and have supposed that it may be explained in this way. Though there is no evidence that the organ of hearing was morbidly acute, yet *occasionally*, during the paroxysms, *when the attention was directed to these impressions*, sounds conveyed to the mind new and more distinct ideas. She then, like a blind man, distinguished people by their step ; and her ear, like his, was alive to all those peculiarities which give character and individuality to sounds, and which enable the hearing to perform the office of the other senses.

Monday, Nov. 25th, she was removed to my house ; but, though she had several paroxysms in the interval, nothing worthy of notice occurred till the 30th. The morning of that day, as she was engaged in her customary employments, she suddenly complained of dizziness, seated herself in a chair, and immediately became insensible. Soon after, she applied a bandage to her eyes, went to her chamber, and changed part of her dress. She then came down, and taking a basket which she had purchased the day before, which was much soiled, remarked that it was dirty and she would wash it. This operation she performed with as much neatness and despatch as she could have done when awake. One of the rooms in the house she had never seen except for a few moments several months before. The shutters were closed, and it was so dark that it was impossible for any one possessing only the ordinary power of vision to distinguish the colors in the carpet. She, however, though her eyes were bandaged, observed and commented on the various articles of furniture, and pointed out the different colors in the hearth rug. She also took up and read several cards that were lying on the table. Soon after, observing her with a skein of thread in her hand, I offered to hold it for her to wind. She immediately placed it on my hands, and took hold of the end of the thread in a manner which satisfied me that she saw it, and completed the operation as skilfully and readily as if she had been awake. Having left the room a moment, I found her on my return with her needle threaded, hemming a cambric handkerchief. She, however, soon abandoned her work, and was then asked to read a little while aloud. Bryant's Poems were given to her ; she opened the book, and turning to the "Thanatopsis" read the whole (three pages), and most of it with great propriety. Something being said about her manner of reading, she observed there were parts of the piece which she did not understand, that she could read much better if she understood it. The day before she had procured several *samples* of calico at the shops, portions of which had been washed since the commencement of the paroxysm. On their being spread out before her, she not only told the shop at which she obtained each, and named its price, but compared the part that had been washed with the piece from which it had been taken, and when there was any change pointed out the difference. A colored girl came in and seated herself before her ; she was asked if she knew that lady—she smiled and returned no answer. Some one said, "She has a beautiful complexion, has she not ?" Jane laughed heartily, and said, "I should think she was somewhat tanned."

At dinner, she took her seat at the table as usual, helped herself to bread when it was offered, presented her tumbler for water, and did not by her manner or actions betray the least want of sight. After dinner, the bandage which she put over her eyes in the morning and had worn constantly, was taken off, and a black handkerchief stuffed with cotton was bound on so as to fit accurately to the nose and cheeks. Though extremely reluctant on account of a severe pain in the head, she was at length prevailed on to write a part of the "Snow Storm," one of the pieces which she was in the habit of repeating when asleep. She finished one stanza of six lines and part of a second. In writing, she followed for a time the ruled lines placed under her paper; but they having been displaced, she proceeded without them, continuing to write nearly in a straight line. In one or two instances she failed to make a proper division of the poetry into lines, and several times misspelled words which she would not have done had she been awake. Twice she noticed the inaccuracy in the spelling and corrected it at the time, but when writing the same word afterwards she fell into a similar error. A person standing behind her very carefully interposed a piece of brown paper between her eyes and the paper on which she was writing. Whenever this was done, she appeared disturbed and exclaimed, "Don't, don't." For some time I watched her narrowly to ascertain whether the bandage was constantly in place, but I could detect no change in its position. A watch was presented to her, the face of which was concealed by a piece of brown paper placed between it and the crystal. Instead of telling the time, she observed, "Anything but a paper watch."

In the evening, when the room was so dark that nothing but the position of the windows could be discerned by common eyes, a *blue* fancy handkerchief was placed before her, and she was asked if she did not want a beautiful *pink* handkerchief. She replied, "I hope I know blue from pink." The next day, during a paroxysm, she went into a dark room and selected from several letters, having different directions, the one which she was requested to find. She was heard to take up one letter after another and examine it, till she came to the one for which she was in search, when she exclaimed, "Here it is," and brought it out. She also, with her eyes bandaged, wrote two stanzas of poetry on a slate—the lines were straight and parallel.

As it was very apparent that her disease was aggravated by the daily trial of her peculiar powers to which she was subjected by a constant succession of visitors, arrangements were made for Jane's removal to the Hospital in Worcester, where she could enjoy that seclusion which seemed essential for her cure. She accordingly left Springfield the fifth of December, and was the same day received into the hospital. For the facts contained in the subsequent portion of the history of this case, I am indebted to Dr. Woodward, the distinguished Superintendent of the Insane Hospital.

After Jane's admission into the hospital, paroxysms similar to those which have been described continued frequently to occur, sometimes two or three in a day. The first was on the evening of the seventh of December. The eyes were tightly closed, the face was flushed, the head hot, and the spot on the left side so exceedingly sensible that she



shrieked when the finger was lightly placed on it. The pulse was 72 in a minute, soft and small. The extremities were cold, and, at the commencement of the paroxysm, the sleep was disturbed by sobbing and groaning—the breathing was interrupted and anxious, and she was uneasy and in perpetual motion. She said nothing till questions were asked her. She told the time by a watch in the dark with her eyes closed—the fire was not extinguished, and of course it was not entirely dark. She answered questions correctly, but with an air of impatience, and said : “they kept asking her to read, but she would not.” She conceived she was at the house of Mr. Stebbins in Springfield ; and yet, at times, she appeared to be conscious she was actually in the hospital, and complained of being locked up, and said she would not have come if she had anticipated such treatment. An hour and a half after the commencement of the paroxysm her feet were placed in the nitro-muriatic acid bath. In five minutes she became calm, and soon waked perfectly self-possessed.

From the 7th till the 13th, she had from one to three paroxysms daily, in some of which she repeated passages of poetry very sweetly, sung some tunes with correctness, and with her eyes bandaged walked about the house and from room to room without inconvenience. These paroxysms lasted from one hour to three or four hours ; and often occurred soon after her meals, or after eating fruit of which she then made a free use.

On the 13th of December she had the most interesting paroxysm which occurred during her residence in the hospital, much resembling those which she had in the earlier periods of her disease. In a paroxysm the day before, she lost a book which neither she nor any one else had been able to find. Immediately on the access of this she went into the parlor, raised the cushion of the sofa, took up the book and silently commenced reading. Her eyes were then covered with a thick cotton handkerchief folded so as to make eight or ten thicknesses, and the spaces below the bandage filled with strips of black velvet. After the handkerchief was tied over her eyes, a person standing at the other end of the room preparing the velvet, took up a piece colored *red*. She immediately exclaimed, “I won’t have red,” though her eyes were then secured in such a manner that no one else could have seen at all. The spaces under the bandage having been carefully filled, a small volume, which she had seen only a short time in the previous paroxysm, was put into her hand. The book had never been read by the person who gave it to her ; and, in opening it, care was taken to hold it in such a manner that he could not see its contents. Jane began at the paragraph indicated, and read distinctly, audibly, and correctly, not however without a slight degree of hesitation at the most difficult words, nearly the whole page. She then hastily closed the book and declared she would read no more. No one present doubted that *she saw through the bandage*—she placed the book at the proper distance, and held her head in such a manner that the light in passing from the book to the eye must have penetrated the bandage. A game at backgammon, was now proposed—she observed she *knew* nothing of the game, but consented to learn it. With a little assistance she soon acquired a knowledge of its

principles—she counted off the points accurately, moved with as much facility and committed as few mistakes as any one not more accustomed to the game. In the afternoon she had another paroxysm, in which she played a number of games of backgammon, and made such proficiency that she won the sixth game of Dr. Butler, who is an experienced player. Knowing her to be a novice, he suggested several alterations in her moves—these she declined making, and the result showed the correctness of her judgment. In the next game the Doctor exerted all his skill, and at its close she had but three men left on the board, and these so situated that a single throw would have cleared the whole. When she threw the dice she called the numbers distinctly and immediately, and made the moves without any hesitation. During the whole of this time the eyes were covered as in the morning. While she was engaged at backgammon, an apple was taken from a dish in which there were several varieties, and held before her, but higher than her eyes. On being asked its color, she raised her head like a person who wished to see an object a little elevated, and gave a correct answer to the question. When she finally awoke after this repeated and long-continued exertion of her powers, she exhibited marks of great fatigue and exhaustion. In the lucid interval, half an hour after the termination of the paroxysm, it was proposed to her to play backgammon. She observed that she never saw it played and was wholly ignorant of the game. On trial it was found she could not even set the men. She afterwards learned the game anew in the interval, but could never play it so skilfully in the waking state as she did in the paroxysms.

On the 16th of the month a very obvious change took place in the paroxysms. Till this time her eyes were very sensible to the light—she kept them firmly closed, strenuously resisted every attempt to open them, and declared the light to be intolerable, shrieking with agony whenever they were forcibly exposed to it. Now she walked about with her eyes wide open, was much less irritable than before, and could not see when her eyes were shut or covered. From this time they were never entirely closed in the paroxysms, but were generally stretched widely open, presenting a dull heavy appearance. Immediately on the occurrence of this change it was predicted that the extraordinary acuteness of vision was gone. This proved to be the case, and she never saw much afterwards when the eyes were closed. Whenever the experiment of covering them with a bandage was tried, she would exclaim, "It is as dark as midnight," "how do you think I can see in the dark?" Just at this time the menstrual discharge reappeared and continued for nearly two days, when it suddenly ceased in consequence of her getting up in a paroxysm and dancing on the cold floor. Her paroxysms soon became less frequent and less severe. When undisturbed, they seldom lasted more than half an hour, during which time she said little or nothing; she then fell into a quiet sleep and soon awoke. Questions or experiments of any kind invariably prolonged the fits, and rendered them more distressing.

After the extraordinary acuteness of vision had disappeared, Jane continued, in the paroxysms, to rehearse passages of poetry and sing songs and hymns, both of which she was incapable of doing in the lucid

interval. A love of mischief became predominant—she laughed constantly, and delighted in playing tricks and in turning everything topsy turvy about the house. In short, her paroxysms resembled temporary fits of insanity; and, as she did not always fall asleep at their close, it was sometimes difficult to determine the precise period when they terminated.

In a paroxysm on the 30th of December she wrote a letter, giving a short but for the most part an accurate history of her own case:—she afterwards remembered that she had written a letter, but could not recollect its contents. In the evening she had the most distressing paroxysm which occurred during her residence in the hospital, but probably not more violent than some she had in Springfield. She appeared to be in an agony of distress, screaming, "My head, my head, do cut it open." Fifty minims of laudanum were given to her in two doses, and a continued stream of cold water was poured on her head. At first the cold application was grateful; but the moment the water fell on the *tender spot*, she uttered a scream and instantly awoke. This was the first time the paroxysm suddenly terminated in consequence of the use of means employed for that purpose.

The next day she was affected with nausea and vomiting—there was severe headache, and she complained much of soreness on the left side of the head—the face was flushed, the tongue furred, while the feet were cold and inclined to be numb. There was a slight dilatation of the pupil and increased sensibility to light. The febrile symptoms continued about a week or ten days, when they gradually disappeared and she was restored to her usual state of health. Subsequently the paroxysms were less frequent and continued a shorter time—they could also almost always be traced to the influence of some exciting cause, such as errors of diet, or some kind of mental or physical excitement. There was not an entire interruption of consciousness—she recollected in the paroxysms what transpired in the interval, and in the interval the circumstances of the paroxysm. Still her manner was hurried, the speech and motions were rather quick and abrupt, there was an unnatural quickness and vividness of perception, and a want of her usual self-control, as was manifested by occasional eccentricities of conduct. After this illness, her head was seldom painful, there was no tenderness at the spot formerly affected, and the natural healthful temperature of the extremities was nearly restored.

During the month of March, Jane had but few paroxysms, and those were short—often lasting but ten or fifteen minutes, rarely an hour. A slight noise, as the opening of a door or speaking aloud, would restore her to consciousness. On the fifteenth she had a distressing paroxysm, occasioned by eating freely of hot Indian cakes. This was the last she had in the hospital. On the fourth of April she returned to Springfield, and after remaining here ten days, went to her friends in Brattleborough.

Her health when she left the hospital was very far from being perfectly restored. In November, December, and January, menstruation occurred at the regular intervals; but, with the exception of the last month, the discharge was small and continued but one or two days.

From that time till the period of her leaving Springfield there was an entire suspension. She continued to feel some oppression after eating, especially if she deviated from the regulations which had been prescribed as to her diet, and any gross violation was almost always followed by an increase of headache, and an unnatural disposition to drowsiness.

In attempting to settle the pathology of this singular affection, the first remark which presents itself is the obvious connection of the paroxysms with the state of the stomach and digestive organs. Prior to their first appearance she had been troubled with a train of dyspeptic symptoms, attended with violent and oft-repeated attacks of headache. The very first paroxysm occurred a few hours after she had eaten a parcel of green currants, and many of her subsequent attacks were occasioned by food taken in too large a quantity or of an improper quality. Indeed so intimate was the relation between the state of the stomach and the existence of the paroxysms, that one might be induced at almost any time by allowing her to indulge freely in the use of particular kinds of food. Some medicines, too, especially those which occasioned nausea, were almost invariably followed by a paroxysm. During the fit she often called for food, particularly for apples; but she seldom awoke as soon as usual after having gratified her appetite. Many of the paroxysms which she had soon after her entrance into the hospital, Dr. Woodward has since observed he is satisfied were owing to the free use of this fruit. At a time when she had invariably one or two paroxysms daily, I gave her an emetic and afterwards allowed her to take but a small quantity of the simplest food. Under this course she had but one slight attack for five days, and was in other respects much better. And the paroxysm which she had in this instance occurred under circumstances that served to show the influence of the stomach in occasioning these attacks. It came on in the stage when she was on the way to Worcester, and was preceded by sickness to which she is subject when riding in a close carriage.

Notwithstanding, however, the abundant evidence which these facts furnish of the connection between the stomach and brain, gastric irritation seems to have been rather an *exciting* than a *predisposing* cause of the paroxysms. The dyspeptic symptoms were evidently inadequate to the production of so serious a disturbance of the nervous system, independent of any prior derangement; nor were the paroxysms most violent and frequent when she suffered most from irritability of the stomach. It may even be questioned whether the dyspepsia itself was not a secondary affection, occasioned by the sympathy of the stomach with the brain. Whatever may have been its origin, it is very obvious that a morbid sensibility of the stomach would have a tendency to aggravate the symptoms of any pre-existing cerebral affection, by furnishing a new point of irritation, and by the sympathetic reaction which would necessarily ensue. The indirect influence which the stomach would thus exert on the brain, would, I conceive, account for the agency of food and other analogous causes in producing the paroxysms; and according to a well-known law, we should expect the stomach itself to suffer most, other circumstances being the same, when its sympathetic effects on distant organs were least apparent.

That amenorrhœa contributed a share to the train of causes that occa-

sioned this complaint, will not, I think, be doubted. In the spring of 1833, when the menstrual discharge was for a short time natural, the headache and other unpleasant symptoms were greatly ameliorated; but returned with increased violence after that was suppressed. Soon after its reappearance in November, the interruption of consciousness during the paroxysms began to be less complete, and there was from that time a gradual improvement in her condition. Yet, notwithstanding this coincidence, and the influence which uterine derangement is known to exert over the female system, I cannot regard the amenorrhœa either as the principal or the primary affection. That it is possible for disorder of the stomach to be occasioned by sympathy with the uterus, and when thus excited to be productive of all the sympathetic effects of idiopathic dyspepsia, no one will question. But, in the present case, how can we account on this supposition for the gradual diminution and final suspension of the paroxysms, while amenorrhœa, the original disease, remained? It is true the menses were for a time restored; but from the middle of January till the middle of April there was an entire suppression, yet the health in other respects continued to improve. Could this have happened had amenorrhœa been the original and principal difficulty? Moreover, a little attention to its history will show how far this theory of the case falls short of embracing all the phenomena. The headache, tenderness of the scalp, sensibility of the eyes, together with the sympathetic effect on the stomach occasioned by exposure to the light, and the habits of sleep, were symptoms which existed in early childhood, long before the uterus could be supposed to exert any specific influence. All these denote a peculiar state of the brain existing, so far as I have been able to learn, prior to and independent of any other derangement. This condition of the brain in her usual state of health was productive of no very serious disturbance; but, owing to occasional exacerbations, or to the disturbing influence of other functional derangements, it at times manifested itself in a less equivocal manner. That this was the primary cause of the chorea with which she was affected several years since, I think there is now little reason to doubt. When she reached that period of life when the menstrual discharge should take place, a new source of irritation was introduced; and it matters not as it respects the influence which the amenorrhœa had upon the system, whether it was itself an effect of this state of the brain, or entirely independent of it. In either case the derangement of this function would aggravate the affection of the head, and coincide with other causes in bringing about the final result. Of these causes gastric irritation seems to have been far the most efficient. Its influence was direct and immediate, often acting alone; and, so far as could be ascertained, independent of all other exciting causes. Perhaps, however, the disease would never have assumed the particular form, or reached the degree of intensity which it did, had the influence of uterine derangement been wanting. This exerted a two-fold effect. It not only tended to aggravate the disorder of the stomach, but, what I conceive to be of vastly more importance, it served to induce an irritable state of the nervous system, in consequence of which all kinds of irritation were followed by new and disproportionate effects.

To repeat, then, I conceive that the primary cause of the paroxysms

which have been described consisted in a peculiarly irritable state of the brain—that this state of the brain constituted a predisposition to this affection, analogous to the predisposition to epilepsy, requiring the action of some exciting cause fully to develope. These causes were directly those affecting the brain, and indirectly those operating on the brain through the medium of other organs. Of these organs the stomach and uterus were by far the most influential in the production of the paroxysms.

The indications in the treatment growing out of this view of the case were, first, to remove the exciting causes of the paroxysms, and secondly to subdue that irritability of the brain which formed the basis of the disease. These indications, however, though perfectly distinct in theory, would, in practice, frequently coincide; for whatever had the effect of restoring the functions of the stomach and uterus, would, *ipso facto*, allay the morbid excitement of the brain; and, on the other hand, in proportion as the equilibrium of the circulation became established, the functional derangements would subside. Still these two points were kept constantly in view, and some means were designed more especially to fulfil the first, and others the second indication.

The patient was first bled, and the feet were directed to be put every night into warm water containing a quantity of the flour of mustard; and reading, sewing, everything having a tendency to produce undue excitement of the brain, was prohibited. A laxative pill, designed to open the bowels once daily, was prescribed, and she was told to exercise freely in the open air—the diet was also limited both in respect to the quality and quantity of the food. She had previously been in the habit of taking a mixture of laudanum and ether on going to bed, which was believed to have some effect in preventing the paroxysms—this she was permitted to continue. The pill, which consisted of aloes, rhubarb, and soap, produced hypercatharsis, and at the end of a week was entirely discontinued. During this time the paroxysms increased both in frequency and violence, though the appetite was improved and she felt less oppression after eating. I have since had reason to doubt whether the regulations respecting diet were very strictly observed, and, indeed, this was a point which occasioned much perplexity and embarrassment throughout the whole course of the treatment. There is not the least doubt that many of her paroxysms were occasioned by her partaking of articles of food which had been strictly prohibited. The tincture of guaiacum was next substituted for the pill. After this change there were no paroxysms for several days; they then returned, and soon became as frequent as they were when she commenced the use of medicine. About the middle of November there was a slight return of the menstrual secretion, which lasted two days and then disappeared. This was not *immediately* followed by any abatement in the symptoms, and the guaiacum having become extremely disagreeable, it was suspended, and a pill of sulphate of quinine and nitrate of silver was given in its stead. The tincture of stramonium was also substituted for the laudanum and ether. Both these medicines, with the occasional use of the blue pill as a laxative, were taken three times daily, and the dose of the latter was gradually increased till the specific effects were apparent. The effect of the stramonium, when taken in full doses, by inducing a tendency to sleep, was rather to increase the frequency of the



paroxysms ; and such was the uniform result obtained from a trial of the other narcotics. In those distressing hysterical paroxysms which she sometimes had, large doses of laudanum usually gave relief ; and when it did she awoke soon afterwards, but the interval between that and the following paroxysm was usually shorter than common. The carbonate of iron with extract of conium was taken for a short time, but soon abandoned, as the frequency of the attacks was rather increased during its use. This medicine excited nausea ; and the nausea, from whatever cause it arose, seemed to promote a determination of blood to the head and thus to occasion a fit. Cold applications were frequently made to the head during the paroxysms—they were generally disagreeable, and could not be continued long enough to produce any good effect. As a preventive, the feet were sometimes put into hot water, but the threatened attack was never thus averted.

Having for some time observed the influence which food and other causes operating on the stomach had in producing the paroxysms, and being dissatisfied with the effects of the medicines which had been given, it was determined to relinquish them all and try the effect of a more strict regimen. She accordingly took an emetic of ipecac. and sulphate of zinc about the first of December, and her food was restricted to crackers, wheat bread and gruel. As before observed, she had no return of her complaint while she remained in Springfield, nor until her diet was changed.

There was one part of the treatment which, owing to the novelty of the case, it was impossible to carry into effect while she remained in a private family. It is very obvious that since the brain itself was the organ affected, every species of mental excitement must prove particularly injurious ; and that little benefit could be expected from medicine so long as its influence was counteracted by moral causes. Such, however, was the curiosity of people to witness feats which appeared to be little short of supernatural, that her powers were constantly called into exercise, notwithstanding the increased distress which she suffered at the time, and the exhaustion which followed, demonstrated the bad effects of this practice. In consequence of this excitement many of the paroxysms were prolonged much beyond the time which they otherwise would have continued, and an impetus was given to the previously excessive determination of blood to the head, which no medicinal agents could countervail. It was to cut off this source of irritation, to place her in a state of seclusion, where the moral as well as the medical part of the treatment adapted to her case could be enforced, that she was transferred to the hospital.

The views entertained by Dr. Woodward respecting the nature of the disease and the proper method of treatment correspond with those already expressed. To restore the equilibrium of the circulation, and to warm the feet which were always cold, the nitro-muriatic acid bath was prescribed, and continued, with few intermissions, almost daily, till the paroxysms ceased. For the purpose of affecting the secretions of the stomach and bowels, and restoring the natural healthy action of the uterus, calomel in small doses, combined with opium and the tincture of sanguinaria, were given. It being soon ascertained that even the small quantity of opium combined with the calomel increased the tendency to sleep, and

that the tincture of sanguinaria occasioned nausea, these medicines were discontinued, and the tincture of guaiacum was substituted, with occasionally a blue pill. During the febrile attack that she experienced early in January, which was probably an exacerbation of the cerebral affection, she took calomel and opium—the head was shaved and blistered, and blisters were applied to the extremities. The liquor potassæ arsenitis was also given to her at this time. On the tenth of January, these medicines were suspended and the tincture of guaiacum was resumed. After this illness the tenderness of the scalp was much less than before, and she suffered less from pain and fullness in the head. Once when she was in the hospital, leeches were applied, during a paroxysm, to the head, and an attempt was made to abstract blood from the foot. No advantage apparently was derived from the loss of blood.

The tincture of guaiacum proving too laxative, it was on the first of February omitted, and the sulphate of iron and myrrh were given in its stead. The paroxysms immediately became shorter and less frequent; but her appetite failed, and unless the utmost caution was used in respect to her diet, she suffered exceedingly from pain and oppression at the stomach. With a view to obviate this inconvenience, the prussiate of iron was substituted for the sulphate, but the change was productive of no benefit. The distress at the stomach finally became so great that it was deemed advisable to omit the iron entirely, and resume the guaiacum—this was no sooner done than the appetite and tolerance of food were restored. It is not improbable that the improvement in the paroxysms which followed the substitution of the iron for the guaiacum was the direct effect of the change of diet which became necessary, and that the exacerbation which ensued from a return to the guaiacum was the consequence of less attention being paid to the quality and quantity of the food. Nothing is more certain than that many of the paroxysms were occasioned by indulgence in full eating and in the use of improper food.

On the twelfth of March she commenced the use of the sulphate of quinine and nitrate of silver. She took a pill containing a grain of the former and a third of a grain of the latter four times daily while she continued in the hospital, and omitted all other medicine.

However difficult it may be to furnish a philosophical explanation of all the facts detailed in the preceding history, it is impossible to impute to the unfortunate individual concerned any intention to deceive. Independent of the prepossessions in her favor which her appearance and character were calculated to awaken, the very nature of the facts stated preclude the idea of imposition—certainly unless it be admitted that others were concerned with her in an attempt to delude the public. No art could enable her to see in a dark room, or when her eyes were closely covered. Nor is the supposition that she was assisted by others at all more tenable; for aside from the improbability of the thing, an argument which those only who know the circumstances can duly appreciate, the same phenomena have been witnessed at Mr. Stebbins's, at my house, and at Worcester; and at neither of these removes was she accompanied by a single individual who had before been connected with her. And, if any farther confirmation is necessary, the fact that a cure has been effected by medical treatment proves, most incontestibly, that these extraordinary powers were the effect of bodily disease.

In framing a theory to account for these facts, I must acknowledge my inability to proceed a single step without the admission of a principle that forms the very foundation of the science of phrenology—which is, that the brain consists of a plurality of organs. It is on this supposition alone, that any intelligible explanation, so far as I am aware, has been given of the circumstance that some of the mental faculties may be awake and active, while others are totally dormant. That such is the state of these faculties in every instance of somnambulism, is admitted by all the physiologists who have treated of this affection. If the mind is an unit, as has been claimed, and if in every mental act the whole brain is equally concerned, how shall we account for some of these acts being readily and efficiently performed, when as it respects others there is an entire loss of power? Without dwelling on the arguments in support of the proposition, I will only observe, that, leaving entirely out of view the question as to the local habitations of the supposed specific organs, the general conclusion that each mental faculty is displayed through the medium of a particular part of the brain, appears to be sanctioned by the strictest rules of inductive reasoning.

In conformity with this conclusion, sleep may be defined to be “the quiescence of all the organs which compose the brain.” The ear does not refuse to take cognizance of sounds in sleep, the nose of odors, or the skin of the impressions that are made upon it, in consequence of any change in the organs of sense; but because those parts of the brain in which the perception of sounds, odors, &c. takes place, are inactive. In dreams, that entire quiescence of the cerebral organs which constitutes perfect sleep is disturbed—some of them are more or less active, and hence dreams of various degrees of vividness arise, the character of which depends on the organ affected. Dreams that relate to visible objects result from the action of that portion of the brain which perceives impressions transmitted from the retina; and those which relate to sounds, of the part concerned in the perception of this order of impressions. When aroused to a certain degree of activity, the excited organs may take cognizance of sights and sounds as in a state of entire wakefulness, and the perceptions may then prompt the corresponding actions. This state of things gives rise to that variety of sleep-talking and sleep-walking, in which the individual can both see and hear, as well as use the muscles of speech and motion.

The unequal excitement of the different parts of the brain which thus occurs, at times, in sleep, exists also as a symptom of disease, with this remarkable difference—that the inequality is much greater than ever attends natural sleep, some of the organs being endowed with a preternatural activity, and others oppressed with a torpor from which no external stimulus can arouse them. The varieties of this affection are numerous, and many of them exhibit phenomena of which the present state of knowledge furnishes no satisfactory explanation; yet they probably are all the result of some functional derangement in the brain, giving rise to this unequal or irregular action of its several parts.

With the exception of the extraordinary facts relative to the vision, there is no circumstance mentioned in the account of this case which is without a parallel in other medical histories. The remarkable revival of

past impressions, the ability to sing and the talent of imitation, which accompanied the paroxysms in Jane, have occurred in other cases, and therefore cannot be regarded as incredible, however wonderful they may appear. But that which distinguishes this case from all others that I can find, and, were I to judge from the incredulity with which the statements respecting it have been received, from all others on record, is the wonderful acuteness of vision—an acuteness so extraordinary as to *appear* inconsistent with our previous knowledge of the laws which govern this function, and requiring some explanation.

I have ascribed that power in Jane by which she acquired a knowledge of visible objects when her eyes were closed and bandaged, to a *wonderful acuteness of vision* ; for I am persuaded, darkness and bandages notwithstanding, that when she read, wrote, &c., she actually *saw*, and that perception was not communicated in a mysterious way, of which we can form no idea. In the records of animal magnetism, it is true, we read of persons acquiring a knowledge of external things by means which have no connection with the senses ; as, for example, discovering the contents of a sealed letter by merely applying it to the pit of the stomach or the back of the head—or, what is stranger still, detecting the secret thoughts of another only by contact, or without contact, if placed in a certain magnetic relation. But, without attempting an examination of this subject, I am satisfied that all the facts in the case under consideration admit of a solution on less questionable principles.

The eye is simply an optical instrument, made up of parts endowed with different refractive powers, so arranged and combined as to form a distinct image just where it should fall, on the retina. That part of the process of vision, therefore, which relates to the formation of this image, is purely physical—the effect of a physical agent, modified by physical causes. The eye is entirely passive—it affects the light passing through it in precisely the same way that inanimate, transparent substances of the same form and density would affect it ; that is, it changes the direction of the rays and brings them to a focus at a certain point behind it. Light must pass from the object through the eye, or no image will be formed on the retina ; and, without this image, we cannot conceive it possible that external objects should be seen. The transfer of this impression to the brain by the optic nerve, and the perception which follows, are vital processes ; and of course may be performed with greater or less facility and perfection, according to the state of the organs on which they depend. These principles must be regarded as established and fundamental, and no theory of vision, in the present state of science, can be admitted which is not founded on them.

Darkness, strictly speaking, is the absence of light ; but, in the common acceptance of the word, its signification is only relative. We speak of darkness in relation to the organs of vision. To organs of a certain construction an apartment may be quite dark, and yet there may be light enough to enable animals whose relation to this element is different, to see perfectly. For example, many quadrupeds, and some birds, can see in an atmosphere which, to most men, would appear totally dark ; and, judging from the habits of many tribes of insects, to which night is the season of activity and enjoyment, we should infer that their organs are

adapted to the degree of light which then exists. Light and heat are analogous in their laws, and in many of their properties. Heat, we know, cannot, by any means within our control, be entirely abstracted from any body or space ; for however low the temperature may be reduced, we feel confident that the reduction might be carried still farther. Had we the same means of testing the presence of light that we have of heat, we should undoubtedly find that it is seldom absent from any space, however dark it may appear to our senses.

There are two ways in which objects may become visible in an atmosphere comparatively dark. The first is by an enlargement of the pupil, so that more rays than ordinary will be admitted into the interior of the eye, rendering objects perceptible which were before invisible. The second way in which objects may become visible, when there is too little light for ordinary vision, is by an increase in the sensibility of the retina, in consequence of which fewer rays than common are necessary to make a distinct impression. This increased sensibility may be the result of various causes. It may be the effect of long confinement in the dark—some men who have been confined in dark cells for years, have in this way acquired an astonishing acuteness of vision. Causes affecting the whole nervous system may give to the sense of sight, in common with the other senses, a high degree of sensibility. The history of Caspar Hauser furnishes a remarkable example of this general exaltation of the senses : his sense of smell was so acute as to be a source of unceasing annoyance—wherever he went he was assailed by disagreeable odors—almost everything but bread and water was disgusting to his taste—he could see much better in twilight than in open day, and in the darkest night could distinguish different dark colors from each other. Inflammation, too, it is well known, occasions an uncommon sensibility to light—a single ray, admitted to an inflamed eye, often gives the most intense pain. In all cases in which the sensibility of the retina is much increased, too strong a light overpowers the organ ; in order to see distinctly, the degree of light must be less than that which would be required in a natural state of the eye.

There is abundant evidence that this increased sensibility of the retina existed in Jane, and that during the paroxysm it was augmented to a very great degree. Hence it was that the light of the sun gave pain to the eye, even when she was in her usual health—hence, too, during the paroxysms, she always closed the eye to exclude the light ; and, if the paroxysm occurred in the daytime, made use of the additional defence of a bandage. This also accounts for the expression which she once used in a cloudy day—"What a beautiful day it is—how bright the sun shines !" The small quantity of light which passed through the eyelid, was sufficient, in the excited state of the retina, to give her the impression that the sun shone. The extreme pain which she experienced when the light was thrown upon the unprotected eyelid with the mirror, is to be explained in the same way. The effect was equivalent to that which would be produced on a healthy eye, if, when open, it were suddenly placed in the focus of a powerful lens. These, and many other circumstances which might be mentioned, leave no room to doubt that the same causes which occasioned the paroxysms, produced a very great temporary

augmentation of the sensibility of the retina—a sensibility which enabled her to see distinctly in a room so dark that to common eyes no object was discernible.

But the question arises, will this state of the retina account for her seeing with her eyes closed and bandaged? *That she could not see through substances absolutely opaque, is certain—she could not see through a watch-case, nor have I any reason to believe she could perceive objects through a book, or a board, or in a distant apartment.* Light passes through the eyelid, as every one can satisfy himself by looking with his eyes closed towards a candle or the sun—it also passes through a bandage, but in so small a quantity as not to be noticed by our organs of vision. If, in the dark, we hold a handkerchief doubled or even quadrupled between the eyes and a lamp, we can perceive light. We can easily conceive, therefore, that light enough may penetrate even a thick bandage to be perceived when the organ is in a state of high excitement.

But granting, what is unquestionably true, that some light did penetrate both the bandage and the eyelid, and reach the retina, no *distinct* image would be formed. If a piece of common writing paper be held between the eye and the light, the paper appears *luminous*, but we cannot *see through it*. The reason is that the rays in passing through the paper are so variously refracted that they cannot afterwards be united into a distinct image; and it is on this account, and not because there is any deficiency of light, that we fail to distinguish objects in the day-time with the eyes closed. The eyelid is *translucent*; and, however intense may be the light, there will be no vision in the ordinary, natural state of the organs, so long as the rays enter the eye through such a medium. A preternatural sensibility of the retina might render the minutest quantity of light *discernible*, but it would have no tendency to make such confused and imperfect impressions as must result from the passage of this light through the eyelid, the means of communicating *clear* and *distinct* notions of visible objects. Something more than an extraordinary sensibility to light is necessary, therefore, to account for vision when the eyes are closed. There must be, it appears to me, a change in the *brain* itself—an excited state of that organ, in consequence of which perception takes place under circumstances in which it otherwise would not.

To render this subject more intelligible, let us consider distinctly the part which the brain performs in the act of perception. The impression made on the retina, by the light reflected from visible objects, is conveyed by the optic nerve to the cerebral organs, and produces a state of those organs which results in perception. Now in order to the obtaining of clear and distinct notions of external objects, something more is required than a simply healthy state of the organs of vision. A distinct image may be formed on the retina, and the impression there made may be communicated to the brain; but if the internal organs are not prepared to receive and act upon it, perception will not follow. Thus in the infant, or in the adult to whose eyes the light is, by the removal of a cataract, for the first time admitted, what may be termed the mechanical part of the process of vision may be perfectly performed, yet no knowledge of the external world will be communicated to the mind. The first faint and imperfect perceptions must be frequently repeated and correct-



ed, before the brain arrives at that state in which impressions made on the retina are instantly followed by correct notions of external objects.

But carry this illustration a step farther. On the very verge of the horizon, just at the point where the sky and water seem to meet, I perceive a faint speck, scarcely interrupting the clear outline which every where bounds the circle of vision. To my eye, this spot conveys no distinct notion; but the sailor, at a single glance, discovers in it masts and sails, and will, perhaps, not only make out the kind of vessel, but the nation to which it belongs. So far as the eye is concerned, my sight is as good as his—the difference is in that state of the cerebral organs, which enables them to supply what is wanting in the mere impression on the retina.

The same is true of the blind man. It is not that any great change has taken place in the external organs of touch or hearing, that these senses impart to him more complete and accurate knowledge of what is transpiring around than they do to others. To him the slightest inequality of surface, or the faintest impulse of the air, are full of meaning and intelligence, because the internal organs are in such a state that they gather important and distinctive characters from these impressions. Education quickens and improves these internal operations by which we judge of impressions received from the senses, by a process precisely analogous to that by which it imparts vivacity and strength to those powers which are more strictly termed intellectual. To the boy taking his first lessons in arithmetic, the rapidity with which a skilful accountant will calculate the amount of a column of figures, appears as far beyond the reach of his capacity, as the astonishing delicacy of perception in the blind does to those of us who are in the possession of all our senses.

Perception, volition, &c. are the results of certain states of particular portions of the brain; and the facility with which the mental acts are performed, depends on the readiness with which these states are assumed by the appropriate organs. Exercise induces a condition of these organs which increases their susceptibility of action, so that perception is not only more vivid and immediate, but is often the consequence of impressions so obscure and imperfect, that in other individuals, or in a different state of the organs, they would be productive of no effect. The state of excitability that results from use, may also be occasioned by the agency of *internal causes*; and hence the extraordinary rapidity with which many mental operations are performed under circumstances of great excitement. Nothing is more common than for persons who are delirious or insane, to evince a force of intellect or brilliancy of imagination, to which, in their natural state, they are entire strangers. Indeed, it is on this principle only, that *spectral illusions* can be explained. When "the brain is brought by internal causes" to a state "which, in general, is the result only of external impressions, ideas not less vivid than sensations ensue; and the individual has the same consciousness as if the impression were transmitted from an actual object through the senses."

But the most remarkable examples of the influence of disease in increasing the activity of the mental faculties, may be drawn from the history of those cases of unequal excitement of the cerebral organs to which allusion has already been made. Dr. Dewar has related the case of an

ignorant servant girl, who, during the paroxysms of her disease, showed an astonishing knowledge of geography and astronomy—a knowledge which she possessed at no other time. She had before overheard a tutor giving instructions to the young people of the family on these subjects; but the impression left on her mind was doubtless very vague and indefinite, if, indeed, it was remembered at all, till the subject was revived during a paroxysm, when her intellectual powers were so much increased as to enable her to comprehend what was before, to her, a mere tissue of words without meaning, or was, at best, but very imperfectly perceived. The sleeping preachers, of whose eloquent performances we occasionally hear so much, furnish another illustration of the same general principle. Whether the discourses which are delivered in these paroxysms of somnolency are such as the sleeper has before heard, or whether they are strictly extemporaneous performances, they serve equally well to prove that some of the mental faculties must be in a state of preternatural excitement. But undoubtedly the most extraordinary example on record of the effect of disease in developing mental power, is that of Zerah Colburn. His history is well known. When quite a child, in his sixth year, without any previous instruction, he could solve, almost without reflection, questions which would require a long calculation to enable others to answer. How he obtained the result he could not tell—the answer seemed to present itself to his mind with the same readiness and conviction of its truth, that the proposition two and two make four does to us. I can conceive of no other mode of accounting for the extraordinary facts connected with this case, than by supposing that the power of perceiving the relations of numbers was increased to such an extent that he could perform the most complicated processes, involving very large numbers, with the same ease and facility that we can add, multiply, and divide, the simple digits. That this extraordinary power was the effect of disease, attended with some functional derangement of a portion of the brain, no one who is acquainted with the facts, I think, will question. This was the opinion of a distinguished physician who saw him at the time, and ascertained that he was then affected with chorea. In conversing with Mr. Colburn, some time since, I asked him if he retained the power of calculation which he possessed in childhood. He said, No, and attributed the loss to a want of its exercise. But why should it require exercise to sustain a faculty in existence which was spontaneously developed?

There is certainly no more difficulty in conceiving how a similar increase of perceptive power should enable Jane to derive clear, distinct notions from the slightest shade, the most vague and undefined impressions on the retina, such as may be supposed to result from the passage of light through a translucent medium, than how, by the exercise of this power, Colburn could instantaneously discover the cube root of 268,336,125, or resolve the number 171,395 into all of its possible factors, or with the same promptness determine that 36,083 is a prime number. The only difference in the two cases is in the organ affected—the principle is the same in both. I say *such impressions as may be supposed to result from the passage of light through a translucent medium*; for that some distinguishable impression would be made on a retina so sensible

as hers, I think may be inferred from the fact that a confused image may be perceived by the healthy eye through paper of considerable thickness.

It should be borne in mind that the supposition of a functional excitement in a portion of the brain is supported by other facts than those evincing an extraordinary acuteness of vision. There was certainly some change, in consequence of which Jane was able to recall past impressions with an extraordinary degree of distinctness. The power of perceiving the relation of sounds, which constitutes tune, was also developed, so that she could sing with a tolerable degree of correctness. These facts show conclusively that some relations were perceived with a vigor and distinctness altogether unusual. Why not, therefore, admit that the same change extended to that function of the brain by which the mind perceives impressions transmitted from the retina?

In conclusion, I conceive that the extraordinary power of vision manifested by Jane, was the result of the combined effect of two causes:—first, increased sensibility of the retina, in consequence of which objects were rendered visible in comparative darkness—and second, a high degree of excitement in the brain itself, enabling the mind to perceive even a confused image of the object.

The facts above detailed, and the conclusions which result from them, naturally give rise to several important inferences, a few of which I cannot forbear to notice.

The first is, that there are cases of somnambulism in which a torpor of some of the faculties is conjoined with a preternatural acuteness of vision. In many cases the sense of sight, like the other senses, is doubtless asleep, while the individual is capable of walking about and transacting some kinds of business; and, in others, it is probably in a state intermediate between that of sound sleep and perfect wakefulness. But there are facts which seem to prove that the vision, in some instances, is even *more* acute than natural, enabling the subject to see distinctly in an atmosphere so dark that in a healthy state of the organs no light could be visible. A medical friend lately mentioned the case of a man, who, in a paroxysm of somnambulism, left his bed in the night, and taking a gun, went out and shot a fowl sitting on a tree. He then returned, without having waked. There is reason to believe that examples of this kind are not exceedingly rare; and yet, from the difficulty of accounting for vision under such circumstances, physiologists have indulged an unwarrantable degree of scepticism with regard to them; and when the specific acts alleged to have been performed have been too well authenticated to be doubted, much ingenuity has been displayed in attempts to explain them without admitting a conclusion which was regarded as unphilosophical. A case referred to in several of the Encyclopedias, the account of which was originally drawn up by a select committee of the Physical Society of Lausanne, forms a good illustration of the influence of preconceived opinions in biasing the judgment. Had the committee admitted that it was *possible* the subject of this memoir actually *saw* in the dark or with his eyes apparently closed, a few well-directed experiments could probably have established the fact, and they would have been spared the trouble of framing theories which were adopted only for the want of a better ex-

planation. On the principle of a *partial increase of perceptive power* in consequence of the excitement of one or more of the cerebral organs, a large class of facts which are now regarded as anomalies would be found to harmonize with the established laws of physiology and pathology.

The second remark which I wish to make relates to animal magnetism ; and it is suggested for the consideration of those better acquainted with the subject, rather than offered as an opinion matured by reflection and a careful study of the facts. It appears *probable* that amid much that is false and deceptive in the observations and experiments which have been offered to prove the existence of such a principle, there are *some truths*, which, distorted and magnified, have served to raise and support a system which, at different times, has received the sanction of great and venerated names. Now it is *possible* for the increased activity of some of the intellectual or perceptive faculties, analogous to the extraordinary power of vision in Jane, to confer on its possessor a superiority over others which might be *supposed* to result from a new sense, or the presence of a mysterious influence, which none but the initiated can feel. That this state of the cerebral organs will not account for all that is *alleged* to be true in animal magnetism, I am aware ; but it *may* be the *nucleus* which supports the errors which cluster around it.

The true spirit of philosophizing is as far removed from unreasonable scepticism as from blind credulity. In all our investigations, whether they relate to physical or physiological science, a firm belief in the uniformity of the laws of nature is indispensable. To those who discard this principle there can be no science, because there would then be no ground of certainty. But it is one thing to believe that *the same causes, in like circumstances*, may produce *dissimilar* effects ; and quite another to believe that our knowledge of the vital powers, and their mode of operation, is far too defective to enable us to predict all of the possible results, or to determine, in every instance, what does and what does not involve a violation of the laws of nature. The subject of causation, in relation both to medical and physiological inquiries, is one involved in great and insuperable difficulty ; and, though it is to be hoped there will be a great advance of knowledge in this respect, it must, from the nature of the case, ever remain imperfect. What can be more inconsistent with the ideas which we entertain of the specific action of different organs, than that the ear or the breast should perform the function of the kidney ? Yet that something of this kind does happen in cases of *Paruria erraticæ*, is indubitably true ; and whether the urine is originally secreted by the kidney, and in consequence of absorption is again mingled with the mass of the blood to be separated anew, or whether it is first formed near the part which furnishes the outlet, it matters not—either supposition requires that the vessels of this part should be endowed with new and peculiar powers, or, in other words, that the specific action of one organ should be transferred to another. The occasional occurrence of such extraordinary phenomena should teach us caution in assigning limits to the possible results of vital action, and induce us impartially to investigate facts, before, in reliance on our fancied knowledge of the laws of nature, we venture on a decision.

Springfield, July 31st, 1834.

## BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, SEPTEMBER 10, 1834.

We have been obliged, as the reader will perceive, to enlarge the dimensions of the present double number of the Journal, in order to make room for Dr. Belden's interesting history. It may seem extraordinary, to some of our readers, that such a solid mass of pages should have been devoted to one article, to the exclusion of the professional intelligence of the day, which gives such peculiar interest to a weekly publication; but it is only necessary to remark, that we have presented a perfect treatise on the remarkable case of Somnambulism which has already excited great attention throughout the country. For next week, we have prepared our usual variety.

## MEDICAL DEGREES.

*Harvard College.*—In February last the degree of M.D. was conferred on the following gentlemen:—Jonathan W. Bemis, James B. Forsyth, Almond Gushee, James Jackson, jr. Horace Kimball, Josiah Moriarty, Edward T. Tremaine, William K. Wells, Charles F. Winslow, William Young.—At the late Commencement, on the following:—Amos B. Bancroft, George A. Bethune, Andrew Denny, Nathaniel A. Fisher, Francis H. Gray, Henry B. Hubbard, Herman B. Inches, Nathan B. Shurtleff, Henry Tucker, Abner B. Wheeler, Samuel Wigglesworth.

The honorary degree of Doctor of Medicine was conferred on Dr. Du Brissis, of Halifax, Nova Scotia.

*Williams College.*—At the annual Commencement of this institution, the degree of M.D. was conferred on Alfred S. Allen, John B. Barnes, Rufus Belden, Chester E. Clapp, Alfred Castle, Edmund Fowler, Osman D. Goodrich, Wayne Griswold, Josiah G. Graves, Josiah S. Hammond, Moses Johnson, Venoni W. Mason, Samuel Robertson, Evander W. Ranney, Amos Walker, Newell White, James L. Lyon, of the Berkshire Medical Institution.—Oramel Martin, M.D. and Israel D. Carpenter, M.D. were admitted *ad eundem*.

The honorary degree of M.D. was bestowed on Gideon Tabor, of Clarkson, N. Y. and on David Palmer, M.D. Prof. of Materia Medica in the Medical Institution at Woodstock, Vt.

At the annual Commencement of *Dartmouth College*, on the 20th ult., eight young men received the degree of M.D.

At *Middlebury College*, on the late annual Commencement, the honorary degree of M.D. was conferred on Dr. Isaac Southworth, of Lockport, N. Y.

## MEDICAL MISCELLANY.

*Hartford Retreat for the Insane.*—Dr. Silas Fuller, of Columbia, Ct. is appointed Superintendent of the Retreat for the Insane at Hartford, in the place of Dr. Todd, deceased.

*Hygeian Pills.*—A medical gentleman, from Berkshire county, visiting this city not long since, called on a former pupil, whom he understood

was engaged in some kind of manufacturing business in Tremont Street. By some sad mistake, in consequence of being a stranger, he found himself in the very apartment in which the celebrated hygeian pills are made by the barrel!

**Cholera.**—This disease still prevails in New York, the average number of deaths daily, since our last, having been about 20. We learn from the papers that one case, in which the patient was in the collapsed state, has been treated successfully by a saline injection into the veins, the individual having perfectly recovered. Our readers will recollect that this mode of treatment was adopted in 1832, both in New York and in this city, and that in every instance the flattering symptoms which immediately succeeded were soon followed by a fatal relapse. We are anxious to hear more particularly respecting the case above alluded to.

The cholera has appeared at Halifax, N. S. where, as we learn from the papers, 62 deaths had already been caused by it on the 30th ult.

The disease appears to be abating in Canada, and in most of the large towns in the United States where it has been prevailing. Boston still remains free from it.

There continues to be considerable excitement in Europe upon the subject of re-vaccination. Von Wiebel, chief of the Military Medical Staff of Prussia, declares in favor of it. We have collected some curious facts, pro and con, which will have place in time.

M. BATKA attributes the properties of sarsaparilla to a peculiar acid, which he denominates *parillinic*.

M. FATTORI has discovered a new method of relieving the toothache, which consists in perforating the tooth with a small trepan, the teeth of which divide the nerve. The orifice in the body of the tooth being filled, the cure it is said is permanent, and the teeth uninjured.


M. MONESTIER recently communicated to the Paris Anatomical Society, the case of a man, aged 78, whose death was caused by the opening of a bloodvessel, by an ulcer situated near the cardiac orifice of the stomach.

No native of Tonga is esteemed a surgeon, neither presumes to practise, unless he has been at the Fiji Islands—or sailed 100 leagues from home. No people on earth have more use for skilful operators, on account of their constant warfare. Dr. Marimer saw them do wonderful operations—such as *causo*, or paracentesis thoracis: *tocolosi*, which consisted in passing a seton through the urethra, to cure tetanus.

**Lectures on Comparative Anatomy.**—Dr. Grant, an eminent professor of comparative anatomy and animal physiology in the London University, is certainly one of the most fascinating writers of the day. It would be doing good service, if some one would republish his writings in this country.

---

**DIED**—In Tuscaloosa, Ala. Dr. Gurdon Saltonstall, aged 39.—In New Orleans, Dr. William Rogers.—At Detroit, Dr. Stephen C. Henry, aged 45.—At Baltimore, of apoplexy, Dr. Wm. Howard.—In Augusta, Me. Dr. Thomas Odiorne, aged 68.—In North Goshen, Ct. Dr. William Marsh, aged 45.—At Salines, Va. Dr. John J. Cabell, of Lynchburg.—At Charlottesville, Dr. S. L. Floyd, of Northampton Co. Va.—At Columbia, Tenn. Dr. Thomas Brown.—Drowned, in New Haven, while bathing, Dr. William L. Fiske, a graduate of the medical institution of that city.

 A few extra copies of Nos. 4 and 5 of the Journal have been struck off, and are for sale at the office of publication. Price 25 cents.



# RECORD OF METEOROLOGICAL OBSERVATIONS FOR AUGUST, 1834.

1834.	THERMOMETER.			BAROMETER.			Winds.	Appearance of the Atmosphere.	Rain in Inches.	Moon's Phase.	Remarks.
	Mini- mum.	Maxi- mum.	Mean.	Mini- mum.	Maxi- mum.	Mean.					
Augus.											
Frid. 1.	63.00	74.50	68.75	29.90	30.09	29.995	S E	Cumuli.		S W, m.	
Sat. 2.	63.50	74.00	68.75	30.02	30.07	30.045	S E	Cumulus.		Stratus, m.	
Sun. 3.	63.00	77.00	70.00	30.00	30.08	30.075	S E	Cirro-cumulo-stratus.			
Mon. 4.	65.50	87.00	76.25	30.00	30.08	30.040	S W	Cumulus.			
Tues. 5.	65.00	83.50	74.25	29.82	30.00	29.910	S E	Cumulus.		○ m.	S E, m. Cumuli and S W, a.
Wed. 6.	71.50	84.00	77.75	29.88	29.92	29.900	S E	Cirrus.			
Thur. 7.	69.50	87.00	78.25	29.80	29.90	29.850	S E	Cumuli.			
Frid. 8.	62.00	74.50	68.25	29.80	29.80	29.800	S E	Cirro-cumuli.			
Sat. 9.	65.00	72.50	68.75	29.80	29.85	29.825	S E	Fair.		Cumuli, a.	
Sun. 10.	61.00	71.50	66.25	29.88	29.94	29.910	S E	Cirro-cumulo-stratus.		N E, a.	
Mon. 11.	61.50	76.50	69.00	29.90	29.94	29.920	S E	Cirro-cumuli.			
Tues. 12.	71.50	87.00	79.25	29.60	29.98	29.740	S W	Cirri.		D a.	
Wed. 13.	68.00	72.00	70.00	29.70	29.98	29.840	N E	Cirrus.	.55		Nimbus, a. Ther. 62° at 10½ m. Nimbus last night.
Thur. 14.	61.00	79.00	70.00	29.55	29.98	29.765	S E	Cirro-cumulo-stratus.	.15		Thermometer 79° at 10h. m.
Frid. 15.	66.50	77.50	72.00	29.55	30.58	29.575	N W	Cumuli.	.35		Severe nimbus last night. Lightning struck Cumuli, a. [the west quarters, nearest to Rain a, and during the night. [magazine.
Sat. 16.	58.50	76.00	67.25	29.65	30.02	29.835	N W	Cumulus.	.55		Cirro-cumulo-stratus, m. High wind.
Sun. 17.	55.00	79.00	67.00	30.05	30.10	30.075	S W	Cirro-cumulo-stratus.			
Mon. 18.	62.50	75.00	68.75	29.75	30.10	29.875	N W	Fair.			
Tues. 19.	69.00	66.50	63.25	29.82	29.92	29.870	N E	Cirro-cumulo-stratus.			
Wed. 20.	57.00	59.00	58.00	29.85	29.92	29.875	N E	Cirro-cumulo-stratus.			
Thur. 21.	53.50	64.00	58.75	29.85	29.85	29.850	N E	Cirro-cumulo-stratus.	.25		
Frid. 22.	66.00	79.00	72.50	29.85	29.85	29.850	S E	Cumulus.			
Sat. 23.	69.00	82.00	71.00	29.85	29.88	29.865	S W	Cirri.			
Sun. 24.	63.00	85.50	74.25	29.86	29.90	29.880	S W	Cumuli.	.10		Cir-cum-stratus, a. Rain during the night.
Mon. 25.	60.00	67.50	63.75	29.95	30.00	29.975	N W	Cirri.			S E, a.
Tues. 26.	53.50	78.00	65.75	29.96	29.98	29.970	N W	Cumuli.			S W, a.
Wed. 27.	54.00	64.50	59.25	29.98	30.02	30.000	N E	Cirrus.		○ m.	S E, a.
Thur. 28.	52.00	70.50	61.25	30.02	30.10	30.060	S E	Cumulus.			Cirro-cumulo-stratus and N E, m.
Frid. 29.	52.50	70.00	61.25	30.16	30.20	30.180	S E	Cirri.			Stratus, m.
Sat. 30.	57.50	76.00	66.50	30.20	30.25	30.225	N E	Cirri.			Stratus, m.
Sun. 31.	57.50	66.50	62.00	30.10	30.22	30.160	N E	Cirrus.			
Aggregate.	61.20	74.08	68.193	29.876	29.976	29.9239	S E	Cirro-cumulo-stratus.	1.95		

Remark.—Mean temperature, 68.193. Maximum on the 29th, wind S W, 87.00. Minimum on the 25th, wind S E, 52.00. Greatest daily variation on the 26th, wind N W, 25.00. Least daily variation 20th, wind N E, 2.00. Range of the wind, 85.00. Mean atmospheric pressure, 29.9239. Maximum on the 29th, 30.25. Minimum 18th, 29.55. Difference from July, 0.0037. Prevailing atmosphere, cirro-cumulo-stratus, cloudy. Prevailing wind, S E. Rain, J. A. BREKETON.

Whole number of deaths in Boston for the fortnight ending Sept. 5, 67. Males, 37—Females, 30.

Of cholera infantum, 3—canker in the bowels, 2—lung fever, 1—inflammation of the bowels, 1—unknown, 2—scarlet fever, 2—fits, 1—convulsions, 2—dropsy, 1—diarrhea, 2—inflammation of the brain, 1—cancer, 1—canker, 1—gangrene of the lungs, 1—accidental, 1—infantile, 1—dropsy on the chest, 1—abscess, 1—throat distemper, 1—old age, 3—consumption, 6—rupture of the gall-bladder, 1—bilious fever, 1—hooping cough, 2—dysentery, 7—typhous fever, 1—dropsy on the brain, 2—debility, 1—inflammation of the lungs, 2—fever, 1—intemperance, 3—teething, 3. Stillborn, 6.

## ADVERTISEMENTS.

### MEDICAL SCHOOL IN BOSTON.

THE MEDICAL FACULTY of Harvard University announce to the public, that some important changes have been made during this year, in regard to the term of Lectures in that Institution, and the conditions of Medical graduation; by which the necessary expense to students is diminished, while the opportunities of instruction are at the same time increased.

By a recent vote of the Corporation and Overseers, two courses of Lectures are now required for a Medical degree, one of which at least must be attended in this University, and the other may be attended at any respectable incorporated Medical School, in which the same branches are taught.

The Lectures will begin on the first Wednesday in November, and continue thirteen weeks, after which time the regular course will be considered as terminated. But for the following four weeks, the Hospital and the Dissecting-room will be kept open, and some Lectures will be given, without additional expense, to such students as may choose to remain.

A new Course of Lectures on the Principles of Surgery and Clinical Surgery has been established, and will go into operation this year. The addition of expense arising from this Course, is considered as more than counterbalanced to non-resident students, by the reduction of the fee for the Course on Anatomy, and by the diminished term of necessary residence.

By an additional act of the Legislature of Massachusetts, passed during their late session, the opportunities for the study of Practical Anatomy are now placed upon the most liberal footing. While the violation of sepulchres is prevented, it is anticipated that an ample supply of subjects for the wants of science will be legally provided at a small expense.

The following Courses of Lectures will be delivered to the class of the ensuing season:

			Fees.
<i>Anatomy, and the Operations of Surgery,</i>	by	JOHN C. WARREN, M.D.	\$15.
<i>Chemistry,</i>	"	JOHN W. WEBSTER, M.D.	15.
<i>Midwifery and Medical Jurisprudence,</i>	"	WALTER CHANNING, M.D.	10.
<i>Materia Medica,</i>	"	JACOB BIGELOW, M.D.	10.
<i>Principles of Surgery and Clinical Surgery,</i>	"	GEORGE HAYWARD, M.D.	10.
<i>Theory and Practice of Physic, and Clinical Medicine,</i>	"	JAMES JACKSON, M.D. & JOHN WARE, M.D.	15.

The Massachusetts General Hospital is open without fee to Students attending the Lectures of the physicians and surgeons. This Institution contains about sixty beds, which are, most of the time, occupied by patients who are subjects partly of medical, and partly of surgical treatment. Clinical Lectures are given several times in each week, and surgical operations are frequent. The number of surgical operations during the last five years has averaged about seventy in each year.

To the Medical College is attached a Medical Library, a costly and extensive Chemical Apparatus, and Collections illustrative of Midwifery. *Materia Medica*, and *Healthy and Morbid Anatomy*.  
*Boston, May, 1834.* July 23. e3wtN1. WALTER CHANNING, *Dean*.

### MEDICAL INSTITUTION OF YALE COLLEGE.

THE course of Medical Instruction in Yale College, for the year 1834, begins on Thursday, November 13, and continues sixteen weeks. There are at least five lectures daily throughout the term, and a part of the time six. The several branches are taught as follows, viz.

<i>Principles and Practice of Surgery,</i>	by	THOMAS HURD, M.D.
<i>Theory and Practice of Medicine,</i>	"	ELI IVES, M.D.
<i>Chemistry and Pharmacy,</i>	"	BENJAMIN SILLIMAN, M.D. LL.D.
<i>Materia Medica and Therapeutics,</i>	"	WILLIAM TULLY, M.D.
<i>Anatomy and Physiology,</i>	"	JONATHAN KNIGHT, M.D.
<i>Obstetrics,</i>	"	TIMOTHY P. BEERS, M.D.

The matriculation fee and contingent bill are \$7.50; the fees for Chemistry, Anatomy, Surgery, *Materia Medica*, and *Theory and Practice*, are \$12.50 each, and for *Obstetrics*, \$6, amounting to \$76; the whole to be paid in advance.

By the statutes of the State, the requirements for graduation are three years' study, for those who are not Bachelors of Arts, and two for those who are; attendance upon two full courses of lectures, either at this Institution or some other of a similar character; an examination and dissertation to the acceptance of the State Board of Examiners; the attainment of twenty-one years of age, and a good moral character. The graduation fee is \$15.

The Medical Students are entitled to gratuitous admission to the Anatomical Museum and the Medical and Academic Libraries, to the lectures upon Mineralogy and Geology, and to the Cabinet of Minerals; and also to the lectures on Botany and on Natural Philosophy, on paying the customary fees of those courses.

All the necessary expenses of living in New Haven during the winter, are from \$2 to \$4 a week, according to accommodations required.  
*Yale College, Aug. 13, 1834.* Aug. 27—eop3t.

THE BOSTON MEDICAL AND SURGICAL JOURNAL is published every Wednesday, by D. CLAPP, JR. at 184 Washington Street, corner of Franklin Street, to whom all communications must be addressed, *post-paid*. It is also published in Monthly Parts, on the 1st of every month, each Part containing the weekly numbers of the preceding month, stitched in a cover.—Price \$3.00 a year in advance, \$3.50 after three months, and \$4.00 if not paid within the year.—Every seventh copy, *gratis*.—Postage the same as for a newspaper.